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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/515,896	02/29/2000	Akio Yoneyama	000233	9736

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EXAMINER

VO, TUNG T

ART UNIT	PAPER NUMBER
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2613

DATE MAILED: 10/03/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/515,896

Applicant(s)

YONEYAMA ET AL. *112*

Examiner

Tung T. Vo

Art Unit

2613

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 July 2002.
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2,3,5 and 7-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 2,3,5 and 7-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

2. Claims 2, 3, 5, 7-13 are rejected under 35 U.S.C. 102(e) as being anticipated by Kato et al. (US 6,151,360) as set forth in the previous Office Action, Paper No. 5.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 14-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kato et al. (US 6,151,360) in view of Igarashi et al. (US 6,324,216) B1 as set forth in the previous Office Action, Paper No. 5.

Response to Arguments

3. Applicant's arguments filed 7/24/02 have been fully considered but they are not persuasive.

The applicant argued that Kato et al. fails to disclose that a GOP boundary position is decided based on a decision by an intra-frame coding mode decision means; an intra-frame mode decision means decides the intra-frame coding mode based on a variance between time wise adjacent input video signals; a one-way coding (P) frame interval decision means for deciding a P frame interval for carrying out motion compensatory prediction coding based on the features of the input video pictures, where the P frame interval inside a GOP is decided based on the decision by the P frame interval decision means, page 8 of the remarks.

The examiner respectfully disagrees with the applicant. It is submitted that Kato teaches a video coding apparatus for coding a video picture by the use of motion compensation prediction of each of video pictures with respect to sequentially input video signals (fig. 3), where the video coding apparatus comprising inter-frame variance calculation means, the picture analysis circuit (60 of fig. 3) for calculating a variance between time-wise adjacent input video signals with respect to the input video signals/pictures (col. 4, lines 1-9), where the inter-frame variance is calculated by the inter-frame analysis circuit (62 of fig. 3) based on the amount of a movement of a moving picture, and the variable coding circuit encodes the video pictures based upon a variance V of luminance signal of the input picture signals as suggested by Kato (col. 5, lines 49-67). Kato further discloses intra-frame coding mode decision means, intra-frame prediction mode (14, 14d of fig. 4) for deciding an intra-frame coding mode without using any motion compensatory prediction (23 of fig. 3) based on the variance (col. 5, lines 49-67), where

the prediction mode (14 of fig. 3) selects intra-frame for coding without using any motion compensation prediction and the detector detects the motion of the input signal to calculate variance, so this suggests an intra-frame mode decision means decides the intra-frame coding mode based on a variance between time wise adjacent input video signals.

Kato further discloses one-way coding (P) frame interval decision means, forward/backward/bi-direction mode prediction (14a, 14b, and 14c of fig. 3) for deciding a P frame interval (fig. 11) for carrying out motion compensatory prediction coding based on the features of the input video pictures, which are I pictures, B pictures, and P pictures (col. 6, lines 52-57); according the figure 11 of Kato, the GOP, GOP0, GOP1, GOP2, GOP3 are determined based on the intra decision and the P frame decision (13 of fig. 3).

Kato further suggests a GOP boundary position (11 and 12 of fig. 3) is decided based on a decision by an intra-frame coding mode decision means (13 and 14 of fig. 3). In view of the discussion above, Kato anticipates the claimed features.

The applicant further argued that Igarashi does not teaches the same “dividing a target video picture into small blocks so as to judge an edge region inside the video picture based on the dispersion value of pixel information on the small block”; and in Kato there is not disclosure of “ predicting coding complexity in each system based on the feature of the video picture inside the GOP so as to control quality at the time of coding in consideration of the complexity”, pages 9-10 of the remarks.

The examiner respectfully disagrees with the applicant. It is submitted that Igarashi teaches the picture fig. 3 is divided into small blocks (fig. 10A-10B), these small blocks are being used to judge an edge region inside the video picture based on the dispersion value of pixel

information on the small block as suggested by Igarashi (fig. 32), where the var1 is used to detect comb deformation of edges in a picture due to motion, so the claimed features would be unpatentable over Igarashi. It is further submitted that Kato teaches means for dividing a target video picture into small blocks (MPEG, Macro-Block is MB) (col. 13, lines 40-51), where the I, P, or B is divided into macro-block (fig. 18C), the macro-block is divided into small block that is divided into pixels as well 8x8 dots (fig. 18C), and coding complexity prediction means (col. 11, lines 41-55) for predicting coding complexity in each coding system based on the feature of the video picture inside the GOP, P frame or picture is inside the GOP, so as to control a coding quantity at the time of coding in consideration of the complexity (col. 13, lines 52-65), where I-pictures and P-pictures are for checking pattern complexity and inter-frame correlation. In view of the discussion above, the claimed features are unpatentable over the combination of Kato and Igarashi.

Conclusion

4. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tung T. Vo whose telephone number is (703) 308-5874. The examiner can normally be reached on 6:30 AM - 3:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chris. Kelley can be reached on (703) 305-4856. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9314 for regular communications and (703) 872-9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-4700.

Tung T. Vo
Examiner
Art Unit 2613

T.Vo
September 30, 2002


CHRIS KELLEY
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2000